

WATER UTILITIES

**A Guide to Applicants
for a Certificate of
Public Convenience and Necessity
under the
WATER UTILITY ACT
1982**



**Province of British Columbia
Ministry of Environment**

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RESPONSIBILITY OF APPLICANT

Notwithstanding any acknowledgement of acceptability of information supporting an application that may be implied or imparted from time to time by duly appointed staff assisting the Comptroller of Water Rights, the applicant remains solely responsible for the integrity and operation of the water works in accordance with the provisions of the Water Utility Act (Utilities Commission Act).

PART ONE

GENERAL INFORMATION ON COMMUNITY WATER SUPPLY AGENCIES IN BRITISH COLUMBIA

1.00 TYPES OF WATER SUPPLY AGENCIES

- 1.01 Public water supply in British Columbia is provided by the following types of agencies:

- Municipalities
- Regional Districts
- Improvement Districts
- Water Districts (such as Greater Victoria Water District)
- Water Users' Communities incorporated under the Water Act
- Privately owned water utilities.
- Publicly owned water utilities.

1.10 STATUTORY PUBLIC WATER SUPPLY AGENCIES

- 1.11 Water supply agencies in the first five categories are statutory public water authorities. The first three are currently incorporated under the Municipal Act with Letters Patent, and the Water Districts are incorporated under special legislation.
- 1.12 Water Users' Communities, incorporated under the Water Act, consist of six or more persons who have individual water licences, usually on the same stream. They have elementary powers to operate joint works and to levy assessments on members.

1.20 WATER SUPPLY AGENCIES SUBJECT TO WATER UTILITY ACT

- 1.21 Where a waterworks system supplying water to the public is privately-owned, it is subject to the provisions of the Water Utility Act and the Utilities Commission Act. These privately owned water utilities are regulated in the public interest by the Comptroller of Water Rights. The requirement to obtain a Certificate of Public Convenience and Necessity

before construction or operation of a privately owned waterworks system is part of this regulatory process.

- 1.22 Publicly owned utilities include municipalities that supply water outside their boundaries, in which case they are subject to the provisions of the Water Utility Act and the Utilities Commission Act with respect to service to those outside areas.

1.30 COMPTROLLER OF WATER RIGHTS, ROLE AND ORGANIZATION

- 1.31 The Water Utility Act provides that the powers and jurisdiction of the Comptroller in respect of a water utility shall be the same as are vested in the British Columbia Utilities Commission under the Utilities Commission Act in respect of a public utility. Under these laws the Comptroller has the authority to grant Certificates of Public Convenience and Necessity to allow the construction and operation of water utility plant and equipment, and is responsible for regulating water utilities. Currently the official who holds the appointment as Comptroller also holds the appointment, under other legislation, as Director, Water Management Branch, Ministry of Environment.

- 1.32 The role of the Community Water Supply Section of the Water Management Branch is to perform the day to day investigations required to allow the Comptroller to perform his functions indicated above. The Section is divided into three main working groups, one each for engineering, finance, and administration. In addition, technical staff is stationed in the Ministry's regional offices for consultation and to provide continuing advice to the Comptroller on utility matters.

PART TWO

SPECIFIC INFORMATION RESPECTING WATER UTILITIES

2.00 DEFINITIONS

- 2.01 The Water Utility Act defines a "water utility" as:

"a person, including the lessee, trustee, receiver or liquidator of that person, who owns or operates in the Province equipment or facilities for the diverting, developing, pumping, impounding, distributing, or furnishing of water to or for five or more persons, or to a corporation, for compensation; but does not include:

- (i) a municipality in respect of services furnished by the municipality within its own boundaries; or
- (ii) a person who furnishes services or commodity only to himself, his employees or tenants, where the service or commodity is not resold to or used by others; or
- (iii) the Greater Vancouver Water District under the Greater Vancouver Water Dis-

trict Act; or

- (iv) an improvement district or water users' community constituted under the Water Act; or
- (v) a regional district constituted under the Municipal Act in respect of the service of the supply of water
 - a) in bulk to a member municipality participating in that service; or
 - b) to consumers in a municipality participating in that service."

- 2.02 The word "compensation" is defined in the Utilities Commission Act as:

"a rate, remuneration, gain, or reward of any kind paid, payable, promised, demanded, received, or expected, directly or indirectly, and includes a promise or undertaking by a public utility to provide service as consideration for, or

as part of, a proposal or contract to dispose of land or any interest in it."

2.10 FORMS OF WATER UTILITIES

2.11 The most prevalent reason leading to the formation of a water utility is that the construction of a community water supply system is a prerequisite to the approval of a proposed subdivision of land to create serviced residential lots. In some cases a community water supply system is not required for a subdivision but the developer may wish to provide the service to enhance the saleability of his land. Either way, a water utility is created.

2.12 A "water utility" may take the form of one of the following:

- a. An individual;
- b. A partnership registered with the Registrar of Companies in accordance with the Partnership Act;
- c. A society or an association incorporated under the Society Act;
- d. A company incorporated under the Company Act;
- e. A strata corporation in accordance with the Condominium Act;
- f. A municipality, where it provides service outside its boundaries;
- g. A regional district, where it is furnishing service other than to a member municipality or to customers in a municipality participating in that service.

2.20 DUTIES AND RESPONSIBILITIES

2.21 The Water Utility Act provides that every water utility shall be subject to all the duties, responsibilities, and restraints imposed upon a public utility under the Utilities Commission Act. Some of the specific duties, responsibilities, and restraints imposed by the latter statute include, but are not limited to, the following:

- a. No person shall begin the construction or operation of any utility plant or equipment without first obtaining a Certificate of Public Convenience and Necessity. (Sec 51)
- b. Every water utility shall furnish a service that is adequate, safe and reasonable. (Sec 44)
- c. Upon reasonable notice every water utility shall provide service without discrimination or undue delay. (Sec 45)
- d. No water utility shall cease operation without permission. (Sec 47)
- e. Every water utility shall obey the lawful orders of the Comptroller. (Sec 48)
- f. Every water utility shall furnish information and complete and return forms required by the Comptroller. (Sec 49)
- g. Every water utility shall have an office in British Columbia in which all its accounts and records shall be kept. (Sec 50)
- h. A water utility shall not dispose of its property without first obtaining the approval of the Comptroller. (Sec 59)
- i. A water utility shall not consolidate, amalgamate or merge with another person (or corporation) without first obtaining an order of the Comptroller. (Sec 60)

j. A water utility shall not permit the transfer of its shares to another corporation without first obtaining the approval of the Comptroller. (Sec 61)

k. All rates to be collected, charged or enforced shall be filed with the Comptroller. (Sec 67)

2.22 Penalties are provided by the Utilities Commission Act for infractions of the provisions of the Act and for non-compliance with any orders made by the Comptroller.

2.30 REGULATORY PROCEDURES

2.31 In regulating water utilities the following are some of the procedures currently in effect:

2.32 PRIOR TO CONSTRUCTION

- (a) The prospective water utility must make application to the Comptroller for a Certificate to construct and operate the proposed waterworks system. Part Three of this booklet contains detailed information as to what information and documentation should accompany the application. Applicants should allow at least three months for the processing and examination of the application.
- (b) The approval of the Comptroller is indicated by the issuance of a Certificate.
- (c) Upon issuance of the Certificate, and subject to any statutory approvals required by other Government agencies, the water utility may commence construction of the waterworks system.
- (d) The regional office must be notified two weeks before construction is scheduled to begin to arrange for inspections.
- (e) In addition to the possible imposition of penalties as specified in the Utilities Commission Act, *failure to obtain a Certificate before beginning construction will delay approval of the subdivision*. The consequences of illegal construction are the refusal to accept sub-standard works, exposure of completed works for inspection, posting of funds to guarantee the adequacy of works, or any other requirement considered necessary to resolve particular circumstances.

2.33 UPON COMPLETION OF CONSTRUCTION

- (a) After construction is completed the water utility is required to submit to the Comptroller four copies of "as-built" drawings, certified by its engineer. The engineer will be required to sign a statement that he inspected the construction and that the works were satisfactorily installed and operate properly as designed. In accordance with the Subdivision Regulations under the Local Services Act, the Approving Officer may not approve subdivision plans for registration until he has been advised that the Comptroller has accepted the "as-built" drawings for filing; Note: An engineer can certify the "as-built" drawings only if he has inspected the construction of the works. It is, therefore, important that the services of a consulting engineer be retained for both the design and construc-

tion supervision of the water system.

- (b) When the subdivision plan has been registered the water utility is required to submit 2 copies of the registered plan to the Comptroller within thirty days of the date of registration together with 2 copies of any easements that have been required to be registered in favour of the utility.

2.34 BEFORE PROVIDING SERVICE CONNECTION TO CUSTOMERS

- (a) Before operation can commence and the first customer is connected to the waterworks system the water utility should submit to the Comptroller for acceptance and filing a tariff containing all rules, regulations and rates pertaining to the operation of the system. No rule or rate is legally enforceable until the tariff is accepted for filing. A sample of an acceptable form of tariff is made available to water utilities.
- (b) All financial records and books of the water utility must be kept separate from any other undertaking of the person or corporation owning the water works system. It is required that all water utilities use the Uniform System of Accounts for Class D Water Utilities, copies of which are available from the Comptroller.

2.40 SOURCES OF SUPPLY

2.41 SURFACE WATER

Under the Water Act all surface water in the Province is owned by the Crown. Applicants for a Certificate who intend to use a surface water source must apply separately for a water licence. General information on water law and application forms are available from the Comptroller or from the regional offices.

Applicants for a Certificate are advised that the Certificate will not be issued until a copy of the "letter of allowance" has been received indicating that a water licence will be granted. Since the water licensing process involves an investigation of the source and of existing water rights, an early application for a water licence is advisable to minimize subsequent delays. In some circumstances, the applicant for a water licence may be required to provide a hydrology study by a professional hydrologist to confirm water availability from the proposed source. Where a development is planned to proceed in stages, consideration must be given to future availability of surface water as the water licence is granted for one stage at a time.

2.42 GROUNDWATER SOURCES

Where groundwater is to be the source of supply, a report prepared by a groundwater geologist or a professional engineer experienced in groundwater shall be submitted. Detailed information, policies and procedures are contained in "Community Water Supply Wells-Guidelines for Groundwater Reports and Well Testing," (see Appendix XI). The guidelines are to assist the geologist or engineer in obtaining and presenting sufficient data to establish the characteristics of the groundwater aquifer and the safe yield of the well.

If the proposed source of supply is a spring, its use is dependent upon the granting of a water licence under the Water Act. However, some springs show characteristics of groundwater and should be tested accordingly.

All groundwater reports and well logs submitted in support of an application for a Certificate are appraised by the Groundwater Section, Water Management Branch, of the Ministry of Environment. Since the confirmation of an adequate source of supply is of primary concern, applicants are advised to submit related support material at the earliest possible stage of the application process.

2.50 REGULATIONS

- 2.51 Water utilities are obligated to comply with specific waterworks regulations which, among other things, require that a water utility shall:

- a. provide an adequate supply of potable water;
- b. obtain all necessary permits for road crossings, etc.;
- c. where meters are required, provide same;
- d. maintain the system in good working order;
- e. maintain accurate records and plans as required by the Comptroller;
- f. maintain a log book of the system's operations;
- g. provide the Comptroller with plans of proposed changes and extensions for his approval in accordance with this guide.

- 2.52 Having been granted a Certificate, it is in the public interest that the water utility maintain a continuous and assured water service. Cessation of service by the Water Utility Company may not be approved until an alternate arrangement for continuing service is made. (Section 47, Utilities Commission Act)

2.60 REQUIREMENTS OF OTHER STATUTORY AUTHORITIES

Compliance by the utility with the requirements of all other statutory authorities having jurisdiction will be the responsibility of the utility and its agent.

PART THREE

DETAILED GUIDE TO MAKING APPLICATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

3.00 PURPOSE OF GUIDE

The purpose of this guide is to provide applicants for a Certificate with a clear statement of what should be done and what documentation and other evidence is required to support the application. It is the applicant's responsibility to ensure that all other approving agencies have provided final or preliminary

approvals where required. The applicant is advised to consult with the Ministry's Regional Water Management office prior to application to the Comptroller. The application is not considered approved until a Certificate of Public Convenience and Necessity has been issued. Applicants should allow at least three months for the approval process.

3.10 METHOD OF APPLICATION

An application for a Certificate of Public Convenience and Necessity shall include:

- a. A completed form of application, as appearing in Appendix I.
- b. The items shown on the check list (Appendix II)
- c. A covering letter in amplification of the check list items, one complete set of supporting documents, and 2 complete sets of engineering drawings and specifications, to be sent to:
The Comptroller of Water Rights,
Water Management Branch,
Ministry of Environment,
Parliament Buildings,
Victoria, B.C. V8V 1X5

with a duplicate of the plans and specifications to the Regional Office of the Region in which the proposed utility is located. See Appendix X for the list of the Ministry's Regional Offices.

- d. The application form shall be signed by an officer of the water utility or by its properly authorized agent who is empowered to act in all matters arising between the applicant and the Comptroller with regard to the Water Utility Act.

3.20 CHECK LIST

The following is a list of items required for a Certificate of Public Convenience and Necessity. An additional copy is attached as Appendix II.

(name of applicant)

(date of application)

ITEM (applicant to check as appropriate)

1. Water utility organization details.
2. Memorandum and Articles of Association.
3. Key plan and service area.
4. Source of supply.
5. Engineering specifications and drawings No. (applicant to list drawings)

by _____

(name, address of consulting engineer)

6. Utility's representative re construction if other than 5.
7. Arrangements for inspection of construction.
8. Easements over private property and permits over Crown land.
9. Construction cost, estimated annual revenue and expenses.
10. Corporate structure and financing.
11. Notice of Application.
12. Approvals by or agreements with other public authorities.
13. Application fee.

For an explanation of these items, refer to the paragraph of the same number appearing in Section 3.30 which follows.

3.30 EXPLANATION OF THE CHECK LIST ITEMS

The numbers appearing before the headings below correspond to the item numbers of the Check List.

1. WATER UTILITY ORGANIZATION DETAILS

An applicant for a Certificate of Public Convenience and Necessity should preferably be a limited company registered under the Company Act, Chapter 59 RSBC 1979, or having a registered office located within B.C. If the applicant has business endeavours other than that of the proposed waterworks, the accounts and affairs of the waterworks must be strictly segregated and separately recorded. A separate water utility company may be required by the Comptroller to deal exclusively with the affairs of the waterworks in some circumstances.

Ownership and control of the waterworks shall be retained by the utility and/or its shareholders until the Comptroller is satisfied that the public interest will not be adversely affected by a transfer of ownership and/or control. Proposals whereby the ownership of the waterworks is automatically transferred to the lot purchasers or others are not acceptable.

2. MEMORANDUM AND ARTICLES OF ASSOCIATION

One certified copy of the Memorandum and Articles should be submitted if the applicant is a limited company.

3. KEY PLAN AND SERVICE AREA

Two (2) copies of a key plan shall be submitted showing the location of the proposed service area, in relation to existing gazetted roads, lakes, and the boundaries of any municipality in the vicinity.

The plan must also include a legal description of all lands to be served. Where it is proposed that a subdivision (including a strata title) be developed in phases or stages, an overall plan should be provided showing an outline of the anticipated ultimate development.

4. SOURCE OF SUPPLY

a. SURFACE WATER

If the applicant proposes to take a supply of water from a stream, lake, or spring, assurance must be provided by the applicant that he is in a position to obtain a water licence. Please refer to Section 2.41 of this guide.

b. GROUNDWATER

Where groundwater (wells) is to be used as a source of supply, a report prepared by a groundwater geologist or professional engineer experienced in groundwater shall be submitted. Refer to Section 2.42 and Appendix XI of this guide.

5. ENGINEERING SPECIFICATIONS AND DRAWINGS

Two complete sets of detailed design drawings of the proposed waterworks, signed and sealed by the engineer, shall be submitted for review. The detailed drawings shall show plan views, elevations, sections and details, which, together with the specifications and general layouts provide all the working information for contracts. Dimensions, relative elevations, the location, type, and size of piping shall be included. Similar comprehensive drawings shall be submitted for projects involving additions or extensions to an existing system. Design guidelines now being prepared, will be available from any office of the Water Management Branch, Ministry of Environment.

6. UTILITY'S REPRESENTATION RE CONSTRUCTION

The applicant must provide the name, address and telephone number of the person who will be in charge of construction activity.

7. ARRANGEMENTS FOR INSPECTION OF CONSTRUCTION

The applicant is required to submit evidence that arrangements have been made for its consulting engineer to inspect and test the works during and after construction, as required, in order that the consulting engineer can later certify that the works have been installed correctly, tested and operate as intended by the design.

8. EASEMENTS OVER PRIVATE PROPERTY AND PERMITS OVER CROWN LAND

Where pipelines and other waterworks components are to be located on private property, assurance is required that the applicant will obtain legal easements benefitting the utility and satisfactory to the Comptroller, for the operation and maintenance of all plant and facilities so located. Evidence is also required that a permit has been issued or will be issued for the location of waterworks within public rights-of-way or over Crown land.

9. CONSTRUCTION COST, OPERATING EXPENSES AND REVENUE

Estimates of construction cost, operating expenses and revenue are to be submitted. Standard forms for reporting these are attached as Appendices III and IV. Estimates of operating expenses and revenue should be shown broken down into the applicable accounts at the end of the first full year and the fifth year of operation.

10. CORPORATE STRUCTURE AND FINANCING

a) CORPORATE STRUCTURE

Ability to provide continuity of operation is a prime consideration in the review of any application for a Certificate. An applicant must clearly demon-

strate the means whereby the necessary waterworks may be constructed, operated and maintained. Full details of the following should be provided:

- i In the case of a limited company — the capital structure proposed.
- ii In all other cases, the financial resources to be made available.
- iii Cash flow forecasts, showing the financing involved and the cash to be generated by the utility. These forecasts should be combined with those required in Item 9 above.

Special financial arrangements securing continuity of operation are required where it is the intention of the applicant to create a water utility for the purpose of providing water service to a proposed residential subdivision as described below:

b) WORKING CAPITAL

A fairly long period of time may elapse before a substantial number of lots are occupied by rate paying customers of a utility. During that period it would not be reasonable to expect a minority of customers to carry the cost of operating a system which is much more extensive than is necessary to supply their needs. In these circumstances, an applicant for a Certificate is required to give an undertaking for the provision of an acceptable level of working capital and deficit financing, both initially and subsequently, to operate the waterworks until such time as there are enough customers connected and paying rates to make the utility self-sustaining.

In support of proposals in this respect the Comptroller may, as a prior condition to the issuance of a Certificate, require the applicant to create a Revenue Deficit Trust Fund in an amount, in all ordinary circumstances, scaled to the size of the service area of the utility. The Fund, where required, is established so that its use is at the sole discretion of the Comptroller, who will conditionally permit the interest earned by investment of the Fund to accrue to the benefit of the utility, and who will release the whole or part of the Fund to its beneficial owner when satisfied that the utility has developed to mature status in terms of the number of rate paying customers and economic viability.

c) CONTRIBUTIONS IN AID OF CONSTRUCTION

To build a utility plant to serve an area having no customers is clearly uneconomic, and on these grounds alone a Certificate may be refused. Construction may be feasible, however, if the person or

company for whose benefit the construction is undertaken is prepared to contribute with no expectation of a return on investment, the entire cost of installing the necessary waterworks. For that reason, it is a widely accepted practice for real estate developers to contribute to the utility the cost of constructing the waterworks to serve the land they wish to market as serviced lots.

d) MAINTENANCE RESERVE TRUST FUNDS

Small water utilities are unable to finance unusual or substantial capital expenditures through sources ordinarily available to larger business enterprises. Therefore, to provide assurance that an amount of capital is available to the utility to be used directly or as debt collateral, as a prior condition to the issuance of a Certificate, applicants will be required to create a Maintenance Reserve Trust Fund in an amount, in all ordinary circumstances, scaled to the size of the service area of the utility. The Fund is required to be established so that its use is at the sole discretion of the Comptroller, who may order that the interest earned by investment of the Fund is to accumulate in and form part of the Fund, or that the interest may be used to cover operating and maintenance costs until revenue from connected customers is sufficient to adequately maintain the system. In general, and in the absence of extenuating circumstances, when a waterworks system has demonstrated it is capable of independent financial integrity or when the system is transferred to a public authority, the Maintenance Reserve Trust Fund may be released by the Comptroller to its beneficial owner.

In circumstances where the utility is a separate legal entity from the person advancing monies for the purposes of a Revenue Deficit Trust Fund, a Maintenance Reserve Trust Fund, or contributing waterworks or monies to construct waterworks, the terms and conditions relating to the advances and/or contributions must be set out in an agreement between the parties. The agreement should include a clause which states that the agreement itself is made subject to the approval of the Comptroller.

The following appendices relating to the creation of a Maintenance Reserve Trust Fund and a Revenue Deficit Trust Fund are self-explanatory:

Appendix V - Standard method of establishing and keeping Maintenance Reserve Trust Funds

for water utilities.

Appendix VI - A draft irrevocable letter of authority.

Appendix VII - Bank confirmation.

The irrevocable letter of authority should be completed for the total amount required. After the institution holding the Fund has acknowledged receipt, the original of the irrevocable letter should be returned by the institution to the Comptroller with a covering letter.

If it is decided to constitute the Fund with securities acceptable to the Comptroller they should be in bearer form and held in safe keeping under the letter of authority as provided. Once the Fund has been invested, the original completed confirmation form should be returned to the Comptroller by the financial institution with a covering letter. Upon completion of these arrangements, a formal Order for the Maintenance Reserve Trust Fund will be issued by the Comptroller.

Where a Revenue Deficit Trust Fund is required to be created, the procedure to be followed is the same as for a Maintenance Reserve Trust Fund, except for any conditions that may apply to the use of interest income of the fund.

11. NOTICE OF APPLICATION

The applicant must advertise notice of his application for a Certificate to construct a water utility in at least one edition of a newspaper of wide circulation in the area of the proposed utility. A 30 day period should be allowed to permit objections, if any, to reach the Comptroller. A copy of the newspaper tear sheet must be forwarded to the Comptroller to verify publication of the advertisement. A sample form of advertisement appears in Appendix VIII.

12. APPROVALS BY OR AGREEMENTS WITH OTHER PUBLIC AUTHORITIES RELATING TO COMMUNITY WATER SUPPLY

a) WATER UTILITIES LOCATED WITHIN THE LIMITS OF MUNICIPALITIES

Where it is intended to operate a water utility within the boundaries of a municipality or other public authority the applicant should provide an agreement with the public authority. The terms in this agreement are subject to the approval of the Comptroller pursuant to the Water Utility Act and the Utilities Commission Act.

b) HEALTH APPROVAL

The Comptroller requires evidence that the applicant has obtained a health certificate for his proposed water system, pursuant to the Health Act. The local

Ministry of Health authority should be consulted for details.

c) HIGHWAYS APPROVAL

The applicant must provide evidence that he has received preliminary layout approval from the Approving Officer.

13. APPLICATION FEE

The prescribed fee payable to the Minister of Finance upon application for a Certificate is \$50.00. The fee is subject to review and can be altered by Order-in-Council.

PART FOUR

FINAL ACCEPTANCE OF WATER UTILITY DOCUMENTATION

4.00 DOCUMENTS TO BE SUBMITTED

After a Certificate of Public Convenience and Necessity has been issued and the system has been constructed, tested and found satisfactory, certain additional documents shall be submitted:

4.10 AS-BUILT DRAWINGS

After construction of the waterworks has been completed, the utility shall submit three copies to the Comptroller and one copy to the Regional Water Manager of drawings containing detailed descriptions of the constructed works. The drawings shall bear the seal of the engineer and shall be accompanied by a statement by the supervising engineer that the works are correctly portrayed by the as-built drawings and are substantially the same as the design which was approved by the Comptroller and that the works have been tested and operate satisfactorily as designed.

Upon acceptance of the as-built drawings for filing, the Comptroller will provide the Approving Officer with suitably endorsed copies of the as-built drawings, thereby indicating that the requirements of the Water Utility Act and the Utilities Commission Act have been met. In addition, one endorsed copy will be sent to the applicant.

4.20 REGISTERED PLANS

Two copies of the registered subdivision plans shall be submitted promptly after registration.

4.30 EASEMENTS OR STATUTORY RIGHTS OF WAY

Two copies of all easements or Statutory Rights of Way benefitting the utility plant over private property must be submitted immediately following registration of the subdivision plan.

4.40 WATERWORKS SUPERINTENDENT

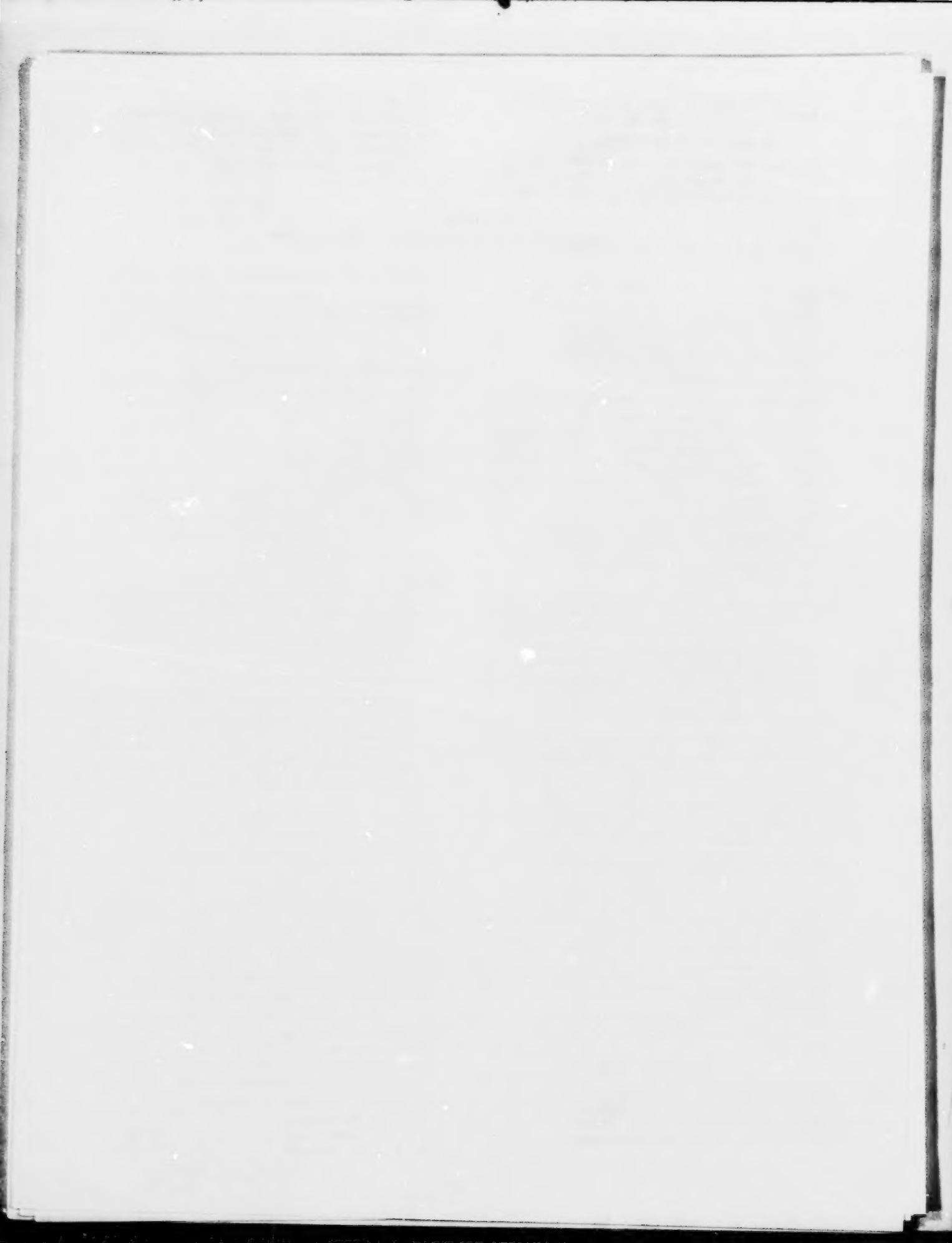
The applicant shall advise the Comptroller of the name, address and telephone number of the person appointed by the utility to take care of the day-to-day operation and the maintenance of the waterworks. The waterworks supervisor should be conversant with the operation of water systems, and should be in a position to respond promptly to any malfunction of the system. It is the responsibility of the utility to advise the Comptroller of any change in appointment of a waterworks supervisor, his address or telephone number.

4.50 TARIFF

The applicant shall submit to the Comptroller in the prescribed form two copies of the proposed tariff of rules, regulations and rates governing service. A copy of a sample form of tariff is attached as Appendix IX.

4.60 LAPSED APPLICATIONS

If it should appear that an applicant for a Certificate has not actively pursued completion of his application for a period of six (6) months or more, the Comptroller may close the file, upon 30 days notice in writing to the applicant. The application fee of \$50.00 shall be forfeited.



**APPLICATION FOR
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
(Water Utility Act and Utilities Commission Act)**

I (We), ...
(Name of Applicant)

of
(Address of Applicant)

hereby make application to the Comptroller of Water Rights of the Province of British Columbia for a Certificate of
Public Convenience and Necessity to construct and operate a public utility to supply water service in

.....
(Legal description of area to be supplied)

.....
.....

I (We) have read the Guide to Applicants for Certificate of Public Convenience and Necessity under the Water
Utility Act and enclose herewith in support of this application information itemized on the check list.

.....
(Applicant)

By
(Agent)

.....
(Address of authorized agent)

Date

CHECK LIST OF ITEMS

ENCLOSED WITH APPLICATION FOR A

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

ITEM (Applicant to check when all information is at hand)

1. Water utility organization details
2. Memorandum and articles of association
3. Key plan and service area
4. Source of supply
5. Engineering specifications and drawings No.
(Applicant to list drawings)
- by
(Name and address of consulting engineer)
6. Utility's representative re construction if other than Item 5
7. Arrangements for inspection of construction
8. Easements over private property and permits over Crown land
9. Construction cost, estimated annual revenue and expenses
10. Corporate structure and financing
11. Notice of application
12. Approvals by or agreements with other public authorities
13. Application fee

For an explanation of these items, refer to the paragraph of the same number in Part Three of the guide.

ESTIMATED CONSTRUCTION COSTS

(Excerpt from Uniform System of Accounts for Class D Water Utilities)

Account Number	Classification	
	1. Intangible Plant	
301	Organization	_____
302	Franchises and consents	_____
303	Miscellaneous and intangible plant	_____
	2. Source of Supply	
310	Land and land rights	_____
311	Structures and improvements	_____
312	Reservoirs	_____
313	Lake, stream or spring intakes	_____
314	Wells	_____
316	Supply mains	_____
	3. Pumping Plant	
320	Land and land rights	_____
321	Structures and improvements	_____
325	Electrical pumping equipment	_____
328	Other pumping equipment	_____
	4. Water Treatment Plant	
330	Land and land rights	_____
331	Structures and improvements	_____
332	Water treatment equipment	_____
	5. Transmission and Distribution Plant	
340	Land and land rights	_____
341	Structures and improvements	_____
342	Distribution reservoirs	_____
343	Transmission and distribution mains	_____
346	Services	_____
348	Hydrants and standpipes	_____
	6. General Plant	
370	Land and land rights	_____
371	Structures and improvements	_____
372	Office equipment and furniture	_____
373	Transportation equipment	_____
379	Other general equipment	_____
	TOTAL PLANT	=====

ESTIMATED ANNUAL REVENUES AND EXPENSES

(Excerpt from Uniform System of Accounts for Class D Water Utilities)

Account Number	Revenues	1st Year	5th Year
460	Unmetered sales to general customers	_____	_____
461	Metered sales to general customers	_____	_____
463	Fire protection service	_____	_____
465	Irrigation sales	_____	_____
466	Bulk sales	_____	_____
474	Other water revenues	_____	_____
Operation and Maintenance			
600	Salaries and wages	_____	_____
610	Purchased water	_____	_____
620	Power costs	_____	_____
630	Chemicals	_____	_____
640	Supplies and expenses	_____	_____
650	Repairs to water plant	_____	_____
660	Transportation expenses	_____	_____
General Expenses			
680	Administration and general salaries	_____	_____
681	Office supplies and other expenses	_____	_____
682	Outside services employed	_____	_____
684	Insurance expenses	_____	_____
686	Employee benefits	_____	_____
689	Miscellaneous general expenses	_____	_____
408	Taxes	_____	_____

**STANDARD METHOD OF ESTABLISHING AND MAINTAINING MAINTENANCE RESERVE TRUST FUNDS
FOR WATER UTILITIES**

THE FUND SHALL CONSIST OF ONE OF THE FOLLOWING:

- (a) Cash, or
- (b) Securities acceptable to the Comptroller of Water Rights, Water Utility Act of the Province of British Columbia.

THE FUND SHALL BE HELD ON DEPOSIT OR IN SAFEKEEPING BY:

- (a) a Canadian chartered bank, or
- (b) a trust company, or
- (c) a federal loan company, or
- (d) a credit union

authorized to carry on business in the Province of British Columbia.

TERMS OF DEPOSIT OF FUND:

The Utility shall provide the institution holding the Fund on deposit or in safekeeping with its irrevocable authority to hold the said Fund to the sole discretion of the Comptroller of Water Rights, Water Utility Act of the Province of British Columbia. A signed original of this letter of authority duly acknowledged by the institution shall be forwarded to the Comptroller. No disbursements shall be paid out of the Fund, other than interest earned thereon, without the written approval of the Comptroller.

VERIFICATION OF FUND:

The Utility shall instruct the institution holding the Fund on deposit or in safekeeping to verify the existence and amount of the Fund direct to the Comptroller at the date of the Fund's inception and yearly thereafter or when requested by the Comptroller.

FINANCIAL PRESENTATION:

ASSET

The Utility shall cause the Fund to be shown as a separate asset on its year-end balance sheet identified as a Maintenance Reserve Trust Fund. The statements shall by note or otherwise indicate that this Fund is a restricted asset subject to the control of the Comptroller of Water Rights, Water Utility Act of the Province of British Columbia.

LIABILITY OR SHAREHOLDERS' EQUITY

The Fund may be shown on the Utility's balance sheet as a liability, as a contribution, as part of retained earnings, or as an investment in shares with a preference as to redemption. The treatment would depend upon whether the funds were lent to the Utility, donated to the Utility, generated through earnings of the Utility, or invested in the Utility.

In any case no interest may be paid by the Utility to any person or persons, advancing, donating, or investing monies for the purpose of the Fund and no repayments shall be made to such person or persons without the written approval of the Comptroller of Water Rights, Water Utility Act of the Province of British Columbia.

INVESTMENT POLICIES WITH RESPECT TO MAINTENANCE RESERVE TRUST FUND MONIES

APPROVED INVESTMENTS, ALL WATER UTILITIES:

- (a) Cash deposited in a savings account within the Province with either a Canadian chartered bank or a trust company or a federal loan company or a credit union authorized to carry on business in the Province.
- (b) Term deposits held within the Province and issued by either a Canadian chartered bank or a trust company or a federal loan company or a credit union authorized to carry on business in the Province provided such term deposits may be cashed within 30 days.
- (c) Securities of the Government of Canada or the Government of any Province of Canada.
- (d) Securities the payment of the principal and interest of which is guaranteed by the Government of Canada or the Government of any Province of Canada.

SECURITIES WHICH MAY BE APPROVED FOR INVESTMENT UPON APPLICATION BY A WATER UTILITY UNDER SUCH TERMS AND CONDITIONS AS THE COMPTROLLER MAY REQUIRE AND FOR SUCH VALUE AS THE COMPTROLLER MAY DETERMINE:

- (a) Bonds of any British Columbia municipality, the principal and interest of which are not guaranteed by the Government of British Columbia.
- (b) Corporate bonds provided they are suitable for investment under the Trustec Act of British Columbia.

Draft Irrevocable Letter of Authority

Company Letterhead

(date)

(Name and Address of Bank)

Attention: The Manager

Dear Sirs:

Re: _____

(Name of Water Utility)

This letter is your irrevocable authority to hold the sum of \$ herewith deposited by

..... into

(Name of Utility)

(Name and Number of Account)

and any monies hereafter deposited into this Account, to and for the sole discretion of the Comptroller of Water Rights, Water Utility Act, of the Province of British Columbia.

I further herewith direct you that you may release any or all of these funds only to or at the written direction of the Comptroller of Water Rights of the Province of British Columbia.

Yours truly

.....

(Name of Water Utility)

The hereby acknowledges the above irrevocable authority and agrees

(Name and address of Bank)

that the said funds are held at the discretion of and will only be released to or on the written direction of the Comptroller of Water Rights, Water Utility Act, of the Province of British Columbia.

Dated at , British Columbia,

this _____ day of _____ A.D. 198 ____

(Name of Bank)

Per: _____

(Signature and Title)

Draft Bank Confirmation
PROVINCE OF BRITISH COLUMBIA
COMPTROLLER OF WATER RIGHTS
WATER UTILITY ACT
WATER UTILITY TRUST BANK ACCOUNT CONFIRMATION FORM

The Manager,

(Date)_____
(Bank Name)_____
(Branch)_____
(Address)

Dear Sir:

In compliance with the requirements of the Comptroller of Water Rights, Water Utility Act, would you please confirm, using the enclosed addressed envelope, full details of the trust bank account held in our company's name with your bank,

which account is designated as " _____ (Name of Water Utility)

Maintenance Reserve Trust Fund Account." The details are to be shown in the appropriate spaces as provided for below.

Yours truly,

(President or Secretary)**BANK CONFIRMATION**

Re:

Name of Water Utility: _____

Address: _____

We, the undersigned, do hereby signify that as at _____ 19 _____, we held

in a current/savings or in a safekeeping account for the above company, titled _____ (Name of Water Utility)

Maintenance Reserve Trust Fund Account, cash or Water Utility securities amounting to \$ _____

(_____)
 (Please list details of securities held on back of form)

(Manager/Accountant)_____
(Name of Bank)_____
(Branch of Bank)_____
(date)

Notice of Application

(Name of Applicant)

**NOTICE OF APPLICATION TO THE COMPTROLLER OF WATER RIGHTS
UNDER THE WATER UTILITY ACT AND THE UTILITIES COMMISSION ACT**

NOTICE is hereby given by _____
(Name of Applicant)

that an application has been made to the Comptroller of Water Rights for a Certificate of Public Convenience and Necessity for the proposed construction and operation of a waterworks distribution system to serve residents in the area of _____

(Legal description of area to be served)

Any person wishing further information in connection with this application should apply directly to _____

(Name and Address of Applicant)

Any objections to this application are to be forwarded to the Comptroller of Water Rights, Water Utility Act. Parliament Buildings, Victoria, B.C., to be in his hands on or before _____

(A date which will allow a period of at least thirty days from date of publication)

(Name of Utility)

(Signature of Applicant or authorized agent)

Sample form of Tariff

Appendix IX

Water Tariff No.
(Water Utility Act)

Accepted for Filing by the
Comptroller of Water Rights,
Water Utility Act.

Date:

Secretary to the Comptroller
Water Utility Act

**TARIFF
STATING RATES AND RULES
FOR
WATER SERVICE
AT**

(Name of Local Area)

BY

(Name of Utility)

(Mailing Address of Utility)

Issued by

(Signature of Utility Owner or
Principal Officer of Utility Company)

This Tariff is available for public inspection
at

(Street address of premises designated by
the Utility)

DEFINITIONS

In this Tariff the following definitions shall apply:

- (a) "Utility" means _____
(name in which Certificate of Public Convenience and Necessity is granted)
- (b) "Rates" shall be the price to be paid by any customer for the quantity of water supplied to him or for the service to his premises for a stated period of time.
- (c) "Service" shall include:
 - (1) The supply of water to the customer.
 - (2) The plant, equipment, apparatus, appliances, property and facilities employed by or in connection with the utility in providing the supply of water to the property line of premises.
- (d) "Premises" means land and buildings thereon.
- (e) "Authorized Premises" means premises which are entitled to, and authorized for, service in accordance with the Certificate of Public Convenience and Necessity of the utility.
- (f) "Eligible Premises" means premises which may reasonably qualify as authorized premises, and includes existing premises peripheral to the utility's authorized service area and premises within the boundaries of the utility's authorized service area requiring additional service connections as a result of re-subdivision and/or rezoning of existing authorized premises or any other change in land use, and *does not include* premises created by any other proposed land subdivisions. (Note: Where no zoning regulations were in effect at the time the utility's Certificate of Public Convenience and Necessity authorized its service area it is assumed that the properties described and authorized for service are for single family use only.)
- (g) "Customer" means any person who is the owner or lessee of authorized premises whose application for service has been accepted by the utility, or any person who is actually receiving service supplied by the utility.
- (h) "Unit" means a unit of accommodation occupied separately or to be occupied separately by an owner or lessee, and which either separately or jointly with other units receives service from a connection to the utility's waterworks, and without restricting the generality of the foregoing includes the separate units of accommodation in all dwellings, duplexes, apartments, condominiums, bare land strata plans, semi-detached buildings, mobile home parks, campgrounds, commercial premises, churches, lodges, community centre, industries and farms.

RULES AND REGULATIONS

1. APPLICATION FOR SERVICE

All applications for water service shall be made in writing by the owner or lessee of the premises to which the application refers, or by the owner's duly authorized agent. All applications for service shall state:

- (a) the purpose(s) for which the service is to be used (i.e. domestic, commercial, swimming pool, irrigation, etc.);
- (b) the size (diameter) of the utility's pipe through which water will be supplied to the premises;
- (c) the legal description of the premises;
- (d) the number of units in connection with the service;
- (e) the location of the unit or units to be served (include sketch).

Additional applications for service shall be made for all extension of service to additional units and for additional purposes.

2. CHARGE FOR A NEW CONNECTION

At the time an application is made for service to premises which had not previously been connected for service, the applicable charge shown in Schedule "A" and/or "B" of this tariff shall be paid by the applicant.

3. CHARGES FOR SERVICE TURN-ON AND SHUT-OFF

- (a) Where the applicable charge under Schedule "A" and/or "B" has been paid and a customer first becomes connected to service by turn-on of a valve in an existing service pipe, or when a customer becomes re-connected after service has been shut-off for non-payment of rates, violation of these rules and regulations, or at the request of the customer, the charge for turn-on shall be _____.
- (b) There is no charge for service shut-off.

4. BILLING AND PAYMENT

All bills are issued _____ and are due and payable within ten
(monthly/quarterly)
(10) days of the date of issue.

5. SERVICE SHUT-OFF DUE TO NON-PAYMENT

When an account becomes one month overdue service may be shut off upon 15 days' written notice. A notice mailed to the last known postal address of the customer shall be deemed good and sufficient.

Service will not be turned on until all outstanding charges against the service have been paid.

6. DISCONTINUANCE OF SERVICE

- (a) Customers must give at least two working days' notice in writing at the office of the utility when requesting discontinuance of service and shall be liable for payment for all service until such notice has been received.
- (b) Any customer who desires to discontinue the use of water for any of the purposes stated in his application for service shall give notice of his intention, in writing, at the office of the utility, and shall further show that any fittings used for the supply of water for such purposes have been disconnected. Thereafter the rates charged shall be changed accordingly.
- (c) The utility may discontinue service to any customer who violates the terms and conditions contained in this tariff. In the event of further contravention of the tariff, the utility may detach the service connection from the customer's premises, and upon re-application for service the customer shall be liable to pay to the utility the cost of performing the said detachment and re-connection in addition to other applicable rates and charges.

7. ACCESS TO PREMISES

The utility shall have the right of access to the customer's premises at all reasonable times for the purposes of making connections or disconnections, reading meters, inspecting pipes and appurtenances, or checking on the use or waste of water.

8. INTERRUPTION OF SERVICE

The utility intends to maintain at all times an adequate and continuous supply of water at suitable pressures but accepts no liability for interruptions due to circumstances beyond its control. However, for interruptions in excess of 48 hours a proportionate rebate will be allowed to customers served on flat rates.

9. RESTRICTIONS ON USE OF WATER

The utility may restrict or prohibit the use of water for gardening, sprinkling, air conditioning, the filling of swimming pools, or other purposes when, in its opinion, such action is necessary to conserve the water supply or to maintain water pressure.

10. MISUSE OF WATER SUPPLY

No customer shall sell or dispose of any water, or permit same to be carried away, or use water or allow it to be used in premises or for purposes other than those stated in the customer's application for service.

11. MULTIPLE DWELLINGS

In the case of apartment houses, duplex houses or houses containing one or more suites, each such accommodation, whether or not self-contained, shall be considered as a separate unit and the customer shall be charged the appropriate rates accordingly.

12. WATER METERS

The utility may, if in its opinion an undue amount of water is used at any time by any customer being served under a flat rate, install a meter and thereafter charge the customer in accordance with the meter rates included in this tariff. All such meters shall remain the property of the utility.

13. WORK TO BE DONE BY THE UTILITY

No person who is not an agent or employee of the utility shall make any connections with or alterations to or tamper with any of the utility's waterworks, including any water meter belonging to the utility, nor turn on or off any valve or corporation or curb stop of the utility, without authorization by the utility in writing.

14. MINIMUM SIZE OF SERVICES

The minimum size of pipe used to serve any one premises shall be $\frac{3}{4}$ " (19mm) nominal diameter. The type and diameter of pipe used on the customer's premises should be selected with due consideration of pressure losses from friction.

15. MINIMUM EARTH COVER OVER SERVICES

All services on the customer's premises shall be buried below the maximum depth of frost penetration but in any event at a minimum depth of _____ feet below the surface of the ground.

16. OWNERSHIP OF SERVICES

All water service pipes and fittings carrying water from the main to the premises property line shall be the property of the utility.

17. STOP COCK

The customer shall provide a shut-off valve (stop cock) inside each of the customer's buildings in which water is used, for the use of the customer in case of leaky or defective pipes or fixtures, or in case the premises are vacated.

18. CUSTOMER'S SERVICE PIPES

Service connection materials installed on the customer's premises shall be rated by the manufacturer to sustain a minimum working pressure of 160 psi (1100 kilopascals). No service pipe or fittings shall be covered until they have been inspected and approved by the utility.

19. DANGEROUS CROSS-CONNECTIONS

The customer shall not permit the plumbing on his premises to be connected to any source of water supply other than the utility's, or to any potential source of contamination, without first obtaining the utility's permission in writing. Any back-flow preventers deemed necessary by the utility to prevent the entry of contaminants shall be installed at the customer's expense.

20. CONDITION OF CUSTOMER'S PIPES AND FIXTURES

All customers at their own risk and expense shall keep their pipes, stop cocks and other fixtures in good working order and shall protect them from frost and other damage. The utility shall notify the customer of any leaky pipes and fixtures that are evident on the premises. If the necessary repairs are not made within two (2) working days after such notice has been given, or when the condition of the pipes or fixtures is such as to cause serious waste of water or damage to property, then without further notice the utility may shut off the water supply. The water shall not be turned on again until such repairs have been made to the satisfaction of the utility, and the charges paid as provided by clauses 3 and 6(c) of this tariff. No person whose water supply is shut off pursuant to this section shall have any claim against the utility for discontinuance of supply.

21. NOTICE OF SERVICE SHUT-OFF

The utility shall have the right at all times to shut the water supply off temporarily to any premises in order to make repairs, replacements, alterations and extensions to the utility's waterworks as shall, in the opinion of the utility, be deemed necessary. Whenever possible the utility will give reasonable advance notice of shut-off, and in all cases where the utility expects service to be interrupted for 24 hours or more, the utility shall give advance notice to its customers.

22. WATER MAIN EXTENSION RULES

22.100 GENERAL PROVISIONS

- 22.101 Applications for extensions of water mains shall be made in writing.
- 22.102 Water main extension rules apply only to eligible premises (see page one), the owners or lessees of which may become customers.
- 22.103 Any waterworks installed hereunder shall be the sole property of the utility.
- 22.104 The size, type, quality of materials, and their location will be specified by the utility and the actual construction will be done by the utility or by a construction agency acceptable to it.
- 22.105 Adjustment of any difference between the estimated cost and the actual cost of any main extension made hereunder will be made within 60 days after the actual cost of the installation has been ascertained by the utility.
- 22.106 In arriving at the length of main extension necessary to render service at any point, the distance from such point to the nearest distribution main shall be considered along lines of proper construction and common practice in the location of public waterworks, due consideration being given to the general layout of the utility's system. The length of the extension shall be measured along the lines of proper construction from the nearest distribution main to the center of the furthest property to be served.
- 22.107 The utility will not be required to make extensions where grades have not been brought to those established by public authority.
- 22.108 Where an extension must comply with an ordinance, regulation or specification of a public authority, the estimated cost of said extension shall be based upon the waterworks required to comply therewith.

22.200 PAYMENT FOR MAIN EXTENSIONS

- 22.201 Where the service connections applied for require a main extension, the applicant or applicants for such service shall be required to advance to the utility before construction is commenced the estimated cost of such extension. The estimated cost of the main extension shall not include the cost of the service line from the water main to property line and except as otherwise provided by the utility's tariff shall not include any costs of increasing the size or capacity of the utility's existing mains or any other waterworks used or necessary for supplying the proposed extension.

22.300 METHOD OF ALLOCATION ADVANCES AND REFUNDS

22.301 Advances by original applicants:

When more than one applicant is involved and an advance is required in payment for a main extension the amount of the advance shall be divided equally or as otherwise agreed among the applicants.

22.302 Advances by subsequent customers:

An extension charge equal to a pro-rata share of the original cost of the main extension shall be collected by the utility from each additional customer who connects to the original main extension. The extension charge collected above shall be refunded equally to the customers who already have advances deposited with the utility as a result of connection to the extension, so that in the result all subscribers will have paid an equal amount.

- 22.303 Advances which may be required from applicants in payment for extensions will be held by the utility without interest. Refunds will be made in accordance with these rules and no depositor will have refunded to him an amount in excess of the amount of his advance. Refunds will be payable to the current registered owners of the properties on account of which the deposits were received. Any amount remaining unrefunded at the end of five years from the date the advance was received by the utility from the original applicant or applicants will be retained by the utility and transferred to the "Contributions in Aid of Construction" account. Thereafter, additional customers will be connected without being required to pay the special extension charge.

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Original Page No. 8

- 22.304 In case of disagreement or dispute regarding the application of any provision of these rules, or in circumstances where the application of the rules appears impracticable or unjust to either party, the utility, or the applicant or applicants may refer the matter to the Comptroller of Water Rights for adjudication.

23. WINTER CONSTRUCTION

The utility reserves the right to refuse to make main extensions and install service pipe to a customer's property line under frost conditions in the winter months that would make the undertaking impractical.

24. AMENDMENTS TO TARIFF

The rates and charges recorded in this tariff are the only lawful, enforceable and collectible rates and charges of the utility, and shall not be amended without the consent of the Comptroller of Water Rights, Water Utility Act, Province of British Columbia. The Comptroller, on his own motion, or on complaint of the utility or other interested persons that the existing rates in effect and collected or any rates charged or attempted to be charged for service by the utility are unjust, unreasonable, insufficient, unduly discriminatory or in contravention of the Water Utility Act, regulations or any law, may, after investigation, determine the just, reasonable and sufficient rates to be observed and in force, and shall, by order, fix the rates.

The utility may submit a letter of application, together with full supporting documentation, to the Comptroller proposing amendments to rates and charges, and other terms and conditions of service. After initial review of the application the Comptroller may require the utility to give an acceptable form of notice of the application to its customers and other interested persons. The notice will state a specific time period within which any interested persons may submit objections to the application to the Comptroller. After investigation of the application and any objections thereto, the Comptroller will decide the matter and notify all interested persons of his decision.

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SCHEDULE "A" — WATER SERVICE CONNECTION

The charges shown below apply to connections to a main (see page 2 of tariff).

The connection charge (a) recovers the average cost incurred by the utility, and not otherwise recovered, of installing a service connection from the water main to a curb stop, and if required, a meter, at the property line of the customer's premises.

Where, at a time prior to a customer's application for service, a service connection has been installed at no cost to the utility or at a cost otherwise recovered by the utility, then upon connection of the service pipe, the rate shown in (b) below shall be paid upon application for service.

(a) Connection Charge:

Up to and including 1" service
connections

\$ _____

Over 1" service connection at
cost plus 20% overhead.

(b) Connection of customer's service
pipe to an existing curb stop

\$ _____

SCHEDULE "B" — CONTRIBUTION IN AID OF FUTURE CONSTRUCTION

The charges shown below apply only to eligible premises. (see page 1)

Where as a result of eligible premises becoming qualified as authorized premises a greater number of units require or may require service from the utility, thus utilizing waterworks capacity presently or prospectively, then upon application for a service connection, in addition to the connection charge and any main extension costs, the charge shown below shall be paid.

For each unit qualifying as authorized
premises

\$ _____

NOTE

Monies collected under this Schedule are required to be deposited by the utility in a Deferred Capacity Trust Fund to be held in the name of the utility subject to the direction and sole discretion of the Comptroller of Water Rights, Province of British Columbia.

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Original Page No. 11

SCHEDULE "C" — DOMESTIC SERVICE FLAT RATES

Applicability: Within the authorized service area of the utility.

Availability: To domestic units (see clause 11).

Rate per unit:

\$ _____

_____ or part thereof.
(monthly/quarterly)

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Original Page No. 12

**SCHEDULE "D" — METER RATES — DOMESTIC, AGRICULTURAL, HOBBY FARMING, IRRIGATION,
INDUSTRIAL AND COMMERCIAL ESTABLISHMENTS**

Applicability: Within the authorized service area of the utility.

Availability: To all units with metered services.

Rates:	Meter Size	Rate
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Original Page No. 13

SCHEDULE "E" — FIRE HYDRANT AND STANDPIPE RATES

Applicability: Within that portion of the utility's authorized service area in the _____ fire protection district or other recognized local fire protection authority.

Availability: The following rates apply to all fire hydrants, standpipes and blow-offs used for fire fighting training and fire suppression purposes.

Rates:	Hydrants 4"	\$ _____	_____ (monthly/annually)
	Hydrants 6"	\$ _____	_____ (monthly/annually)
	Standpipes/Blow-offs	\$ _____	_____ (monthly/annually)

List of Ministry of Environment Regional Offices

1. Vancouver Island

Regional Director
Ministry of Environment
2569 Kenworth Road
Nanaimo, B.C. V9T 4P7

Phone 758-3951
2. Lower Mainland

Regional Director
Ministry of Environment
10334-152A Street
Surrey, B.C. V3R 7P3

Phone 584-8822
3. Thompson-Nicola

Regional Director
Ministry of Environment
1259 Dalhousie Drive
Kamloops, B.C. V2C 5Z5

Phone 374-9717
4. Kootenay

Regional Director
Ministry of Environment
310 Ward Street
Nelson, B.C. V1L 5S4

Phone 352-2211
5. Cariboo

Regional Director
Ministry of Environment
3015-J Glendale Drive
Williams Lake, B.C. V2G 1P5

Phone 398-6702
6. Skeena

Regional Director
Ministry of Environment
Bag 5000
Smithers, B.C. VOJ 2N0

Phone 847-4411
7. Omineca-Peace

Regional Director
Ministry of Environment
1011 Fourth Avenue
Prince George, B.C. V2L 3H9

Phone 562-8131
8. Okanagan

Regional Director
Ministry of Environment
3547 Skaha Lake Road
Penticton, B.C. V2A 7K2

Phone 493-8261

COMMUNITY WATER SUPPLY WELLS

GROUNDWATER REPORTS AND WELL TESTS IN SUPPORT OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

1. GENERAL INFORMATION

Well performance and aquifer capabilities must be adequately assessed where a groundwater supply is to be developed for community use. Certain procedures must, therefore, be followed in well testing and the presentation of groundwater information by the applicant to the Comptroller of Water Rights for a Certificate of Public Convenience and Necessity under the Water Utility and Utilities Commission Acts. The intent of these requirements is not to lay down rigid rules but to avoid unnecessary delays or re-tests at the applicant's expense due to inadequate test procedures or report presentations. The Comptroller, with the assistance of the Groundwater Section, Water Management Branch, is prepared on request to review the requirements for any particular case with the applicant or the applicant's engineer prior to the well test.

The applicant is advised to retain the services of a consulting groundwater geologist or a professional engineer whose field of competence lies within the groundwater field. The final groundwater report presented should where possible discuss such points as the geologic setting, aquifer boundaries, recharge conditions, water quality, possibility of pollution, contamination, including salt water and other unpotable water, recommendations, if any, on a future monitoring program, observation well(s), operation of the well, e.g., overpumping, backwashing, rawhiding, etc. The report is to include a site plan showing locations of the well sites, locations of any unsuccessful test well sites, and any neighbouring wells. The sites are to be shown in relation to existing gazetted roadways, streams and lakes, sanitary land fills, septic field disposal, and the boundaries of any municipalities, improvement districts, etc., in the vicinity. The site plan should show the locations of water sources of other waterworks within one half mile of the boundaries of the proposed utility, also the location of any wells that may be affected through interference by pumping of the applicant's well. A legal description of the proposed well site areas must be provided including where possible registered plan and lot numbers. Approximate elevations should be given on each well assembly, and if possible elevations on important adjacent features such as lake levels, river levels, etc. The report should contain a copy of the well driller's original log for every hole drilled under the program, and also a sketch showing well design specifications for each completed well. Details should be given of the pumping equipment used, and the method of measurement for water well readings and for flow.

At least one sample of the pumped well water must be taken near the end of the pump test and sent for chemical analyses. The analyses should include all major ions, iron and manganese, and tests for other metals if known to be present in the groundwater of the area. A list of recommended parameters for chemical analyses is given in section 3C of this Appendix. Preferably two water samples should be taken, one near the end of the pumping test and one near the beginning of pumping, e.g., almost one hour after start of pumping. The applicant is expected to make his own arrangements with a commercial laboratory for this service. The laboratory's requirements for sample collection and transmission should be adhered to. Samples for bacteriological analyses should also be taken according to the requirements specified by the Ministry of Health as discussed in section 3D of this Appendix.

Pumping tests, recording of data and report preparation should follow standard procedures. For example, with field measurements the drawdown and recovery levels in the pumped well and in the observation wells should be measured in feet to the nearest one hundredth of a foot. The time intervals for both drawdown and recovery readings should be short enough to adequately record any rapid drawdown during start of pumping and any rapid recovery immediately after pump shut down. The time interval after these initial periods can of course then be lengthened between the readings. The pumping rate Q of the water well is to be expressed in US or Imp gallons per minute or metric equivalents. The pumping rate Q is to remain *constant* throughout the period of pumping, in the final "constant rate" test. This test will involve continuous pumping at a constant rate for 24 hours or longer (see special conditions). Step drawdown tests or "maximum drawdown" tests can be used initially to determine the Q rate but these tests are not mandatory. Well water must not be allowed to return to the aquifer during the pumping test period. Sufficient discharge pipe must be laid away from the test well to prevent this possibility arising. The reader is referred to the following two tables for the type of information to be recorded in pumping and recovery tests. A record of any rainfall immediately before, during and after the well test should be reported.

Certain conditions may be attached to the Certificate with regard to the well source. For example, the further collection of data during subsequent well operations and in certain cases a hydrogeological report may be mandatory. These special requirements may have to be met where legal problems arise in the development of groundwater supplies such as groundwater withdrawals affecting stream and spring flows which may be under license, where supplies of water to adjacent wells may be affected by pumping or where a producing aquifer is suspected of being limited in extent or capacity.

2. SPECIAL CONDITIONS

A. BOUNDARY CONDITIONS

If recharge or discharge boundaries are detected, then more frequent measurements are also recommended. This can best be done by returning to the time interval set out for the commencement of the test, i.e., "every minute from 1 to 10 minutes," etc.

B. INDUCED INFILTRATION

This condition could apply in well sites located adjacent to a surface water body; river, lake, etc.

If equilibrium test conditions are clearly shown, that is, a stable water level in the well in conjunction with a uniform rate of pumping, the test may be terminated prior to the recommended standard 24 hour pumping period.

C. FRACTURED BEDROCK

For wells located in fractured bedrock the pumping rate should be at or in excess of the requirements of the application. The pumping rate must be held constant throughout the testing period, which should last for a minimum of 72 hours. In the Gulf Islands and in coastal areas, wells are only to be tested in the middle and late summer and early fall periods. Developers and engineering consultants should coordinate their activities to provide for the testing of wells during the above stipulated periods. Such a procedure would avoid unnecessary delays and will enable a more accurate estimate of well performance to be made.

D. FLOWING ARTESIAN CONDITION

In this special case it is essential to note the artesian pressure head prior to and after a pumping test.

E. DEVELOPED SPRINGS AND SEEPAGE SITES

In the case of springs and seepage areas developed by excavation into ponds and "holding reservoirs" the following procedures are recommended.

The excavation dimensions must be noted. The reservoir must be (if practical) pumped dry and recovery measurements taken as specified above under general comments. The full recovery should be obtained. Notes regarding entry of water into the excavation should be made where possible.

F. COASTAL AQUIFERS

The need for carrying out the recommended procedures for taking samples of the pumped well water for full chemical analyses is emphasized. It is also strongly recommended that a field test kit be available for testing the chloride content of the pumped water during the pumping test. The purpose of the recommendation is to try to determine possible sea water encroachment. If encroachment is evident the pump test may have to be terminated.

In coastal aquifers the consultant must include data on local tidal fluctuations where these are affecting the apparent drawdown in the test well.

3. WATER SAMPLES AND ANALYSES

A. INTRODUCTION

Water in all wells should be sampled and the necessary field and laboratory tests made so that the groundwater chemical and bacteriological quality of each well and its suitability for its intended use can be determined.

Recommended Water Quality standards have been published by the Provincial Ministry of Health for drinking water and the reader is referred to this publication for further details. The Ministry of Health should be contacted for advice on what additional analyses may be required and on any constituents present in well waters which are above the recommended safe limits.

B. CHEMICAL QUALITY AND COLLECTION PROCEDURES

Water quality field testing kits are useful for early determinations after an aquifer zone has been penetrated. Results based on field kit tests should only be used as a guide and are no substitute for a full laboratory chemical analyses.

Sample collection procedures vary from the use of a bailer — common to the cable tool method to more sophisticated samplers which can take a water sample at a specific depth. Usually samples are collected from the discharge during test pumping or after the production pump is installed. Laboratories have certain procedures that must be adhered to on the collection and submission of samples for chemical analyses including requirements for certain field tests.

A list of recommended parameters for chemical analyses follows:

PUMPING TEST

Depth to water in well from top of casing before test _____ ft.			
Time	Time since start of pumping (minutes)	Depth to water in well from top of casing (feet)	Discharge from well (gallons/minute)

For the above table, readings should be taken every minute from 1 to 10 minutes and then every 10 minutes from 10 to 120 minutes (2 hours), then readings every 1½ hours thereafter.

A preferred method for ease in plotting the data, but one that is harder to comply with, is as follows:

Readings every 30 seconds from 1 to 5 minutes
 Readings every minute from 5 to 10 minutes
 Readings every 2 minutes from 10 to 20 minutes
 Readings every 5 minutes from 20 to 50 minutes
 Readings every 10 minutes from 50 to 100 minutes
 Readings every 50 minutes from 100 to 500 minutes
 Readings every 100 minutes thereafter

RECOVERY TEST

Time	Time since start of pumping (minutes)	Time since pumping stopped (minutes)	Depth to water in well from top of casing (feet)
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For the above table, readings should be taken every minute from 1 to 10 minutes and then every 10 minutes from 10 to 120 minutes (2 hours), then readings every 1½ hours thereafter. Slow recovery may require that the last readings be paced as much as 8 to 12 hours apart.

A preferred method for ease in plotting the data, but one that is harder to comply with, is as follows:

Readings every 30 seconds from 1 to 5 minutes
 Readings every minute from 5 to 10 minutes
 Readings every 2 minutes from 10 to 20 minutes
 Readings every 5 minutes from 20 to 50 minutes
 Readings every 10 minutes from 50 to 100 minutes
 Readings every 50 minutes from 100 to 500 minutes
 Readings every 100 minutes from 500 to 1,000 minutes
 Readings every 500 minutes from 1,000 to 5,000 minutes

C. LIST OF RECOMMENDED PARAMETERS FOR CHEMICAL ANALYSES*

	Units
Phen. Alkalinity	mg/L
Total Alkalinity	mg/L
Sulphate ($\text{SO}_4^{=}$)	mg/L
Nitrite and Nitrate ($\text{NO}_2^- + \text{NO}_3^-$)	mg/L
Total Kjeldahl Nitrogen (TKN)	mg/L
Total Phosphorous (P)	mg/L
Fluoride (F^-)	mg/L
Chloride (CL^-)	mg/L
Calcium (CA^{++})	mg/L
Magnesium (Mg^{++})	mg/L
Sodium (Na^+)	mg/L
Potassium (K^+)	mg/L
Manganese (Total and dissolved) (Mn)	mg/L
Iron (Total and dissolved) (Fe)	mg/L
Silica (SiO_2)	mg/L
Sp. Conductance	mg/L
pH	umhos/cm at 25°C
Total Dissolved Solids (T.D.S.)	relative units
Total Hardness (CaCO_3)	mg/L
Turbidity	mg/L
	(J.T.U.)

*Additional parameters may be required where known or suspected sources of pollution exist.

D. BACTERIOLOGICAL QUALITY AND COLLECTION PROCEDURES

A sample should be taken on all wells to determine bacteriological quality. For new or repaired wells AWWA A100-66 recommends the collection of any sample for determination of bacteriological quality be taken following the disinfection of the well. Chlorine solution must first be removed from the well by pumping, and the chlorine residual reduced to less than 2 ppm before the sample is taken. Special care must be taken in collecting the sample to avoid contacting the inside of the bottle or the cap with the fingers.

The local public health inspector should be requested to obtain a sample for bacteriological analyses when the water is to be used for a public water supply system. In situations where this is not possible, sample bottles and advice on sampling techniques may be obtained through the local health district.

E. RELIABILITY OF SAMPLE RESULTS

The quality of any drinking water supply cannot be determined with confidence from the result of a single sample but rather is possible only by observing the results of several samples over a long period of time. Shallow wells that may be influenced by surface contamination near the well may produce water of varying quality depending on the climatic and physical conditions. Therefore, if a sanitary survey shows a well water supply to be obviously subject to pollution, the water may be condemned irrespective of the test results.